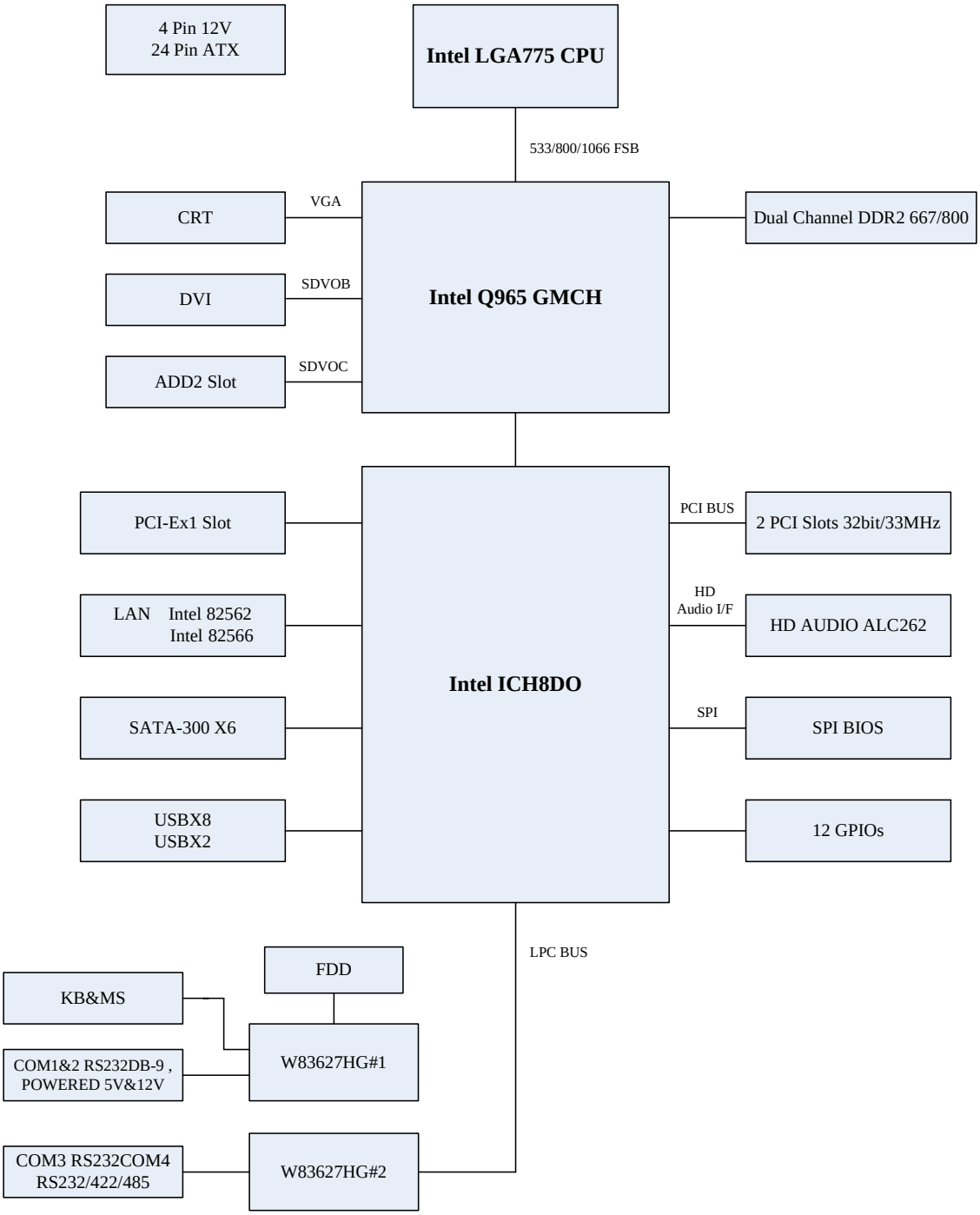
1.4 System Architecture

RUBY-9717VGAR includes INTEL Q965 chipset, it supports the latest INTEL Core 2 Duo processors with 1066MHz front side bus; up to 8GB DDR2 800 SDRAM system memory in four DIMM sockets; six SATA ports and ten USB 2.0 on RUBY-9717VGAR.



RUBY-9717VGAR Block Diagram

Chapter 2
Hardware Configuration

This chapter indicates jumpers', headers' and connectors' locations. Users may find useful information related to hardware settings in this chapter. The default settings are indicated with a star sign (★).

2.1 Jumper Setting

For users to customize RUBY-9717's features. In the following sections, **Short** meanscovering a jumper cap over jumper pins; **Open** or **N/C** (Not Connected) means removing a jumper cap from jumper pins. Users can refer to Figure 2-1 for the Jumper allocations.

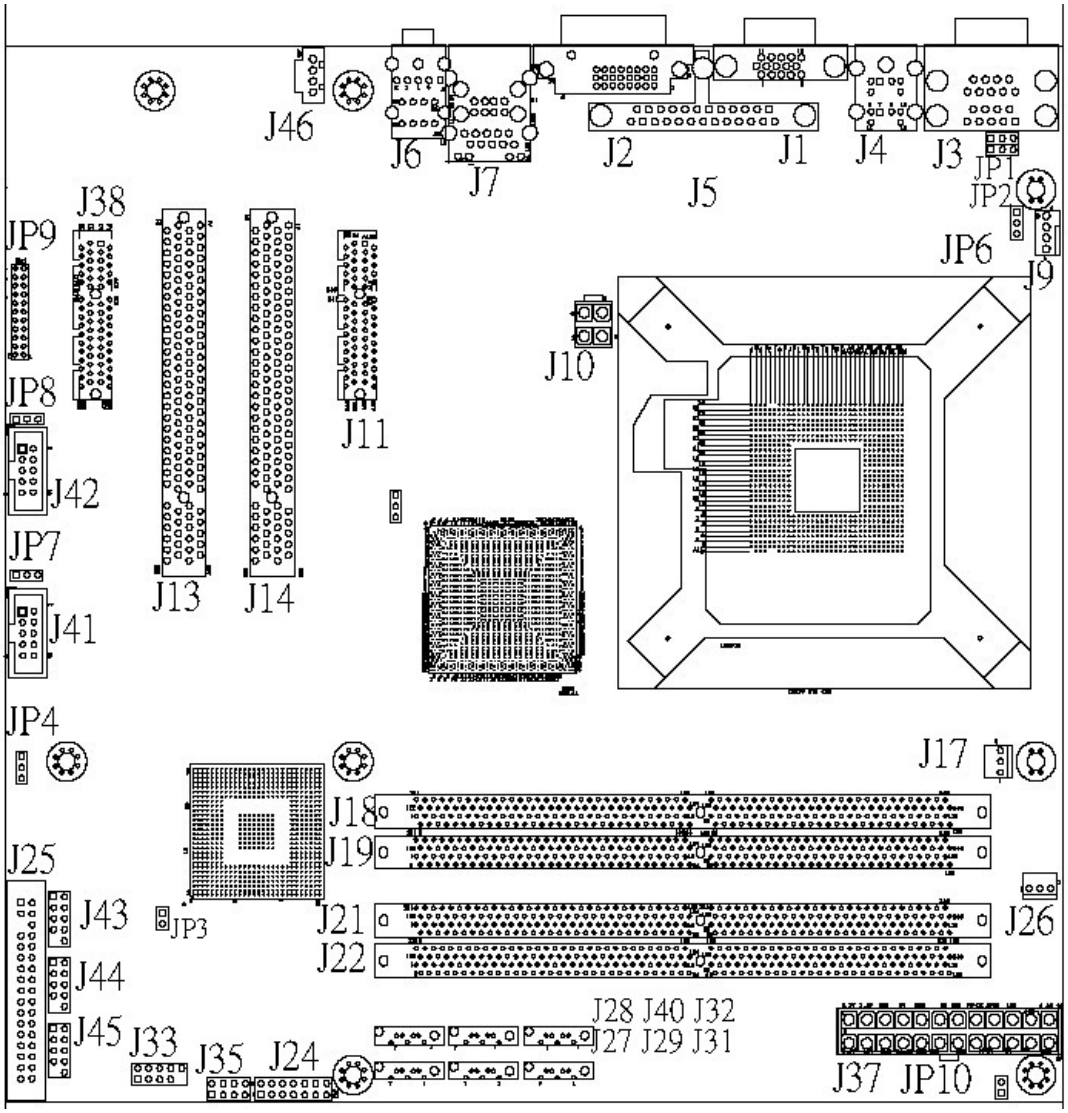


Figure 2-1 RUBY-9717VGAR Jumper & Connector Location

JP1/JP2 : COM1&COM2 RI / Power Function Selection

JP1、JP2	Function
1-2	VCOM
2-3	Ring ★

JP3 : MFG Function Selection

JP3	Function
OPEN	MFG OFF ★
SHORT	MFG ON

JP4 : COMS Clear Jumper setting

JP4	Function
1-2	NORMAL OPERATION ★
2-3	CLEAN CMOS

JP6 : COM1& COM2 VCOM Power Selection

JP6	Function
1-2	VCC ★
2-3	+12V

JP7 : COM3 RI/Power Function Selection

JP7	Function
1-2	+12V
2-3	MODEM RING IN ★

JP8 : COM3 RI/Power Function Selection

JP8	Function
1-2	+12V
2-3	MODEM RING IN ★

JP9 : COM2 RS232/485/422 Selection

JP9	Function
RS-232	5-6、9-11、10-12、15-17、16-18 ★
RS-422	3-4、7-9、8-10、13-15、14-16、21-22
RS-485	1-2、7-9、8-10、19-20
Ps. Pin 19、20、21、22 can be saved, but S/W should keep the COM2 RTS signal low when using RS-422	

JP10 : AT /ATX MODE

JP10	Function
OPEN	ATX Power Mode ★
SHORT	AT Power Mode

2.2 Connector Allocation

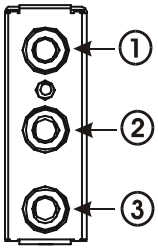
I/O peripheral devices are connected to the interface connectors on this Industrial Mainboard.

Connector Function List

Connector	Function	Remark
J1	CRT Connector	
J2	DVI Connector	
J4	PS/2 K/B and Mouse connector	
J5	COM1 COM2 Connector	
J6	Audio Jack x3	*
J7	LAN+USBx2	
J9	CPU Fan-4P	*
J10	Power 12V Connector	
J11	ADD2 Slot	
J13	PCI Slot2	
J14	PCI Slot1	
J17	Fan_3P	
J18/J21	DDR2_Slot_Chnnel 0	
J19/J22	DDR2_Slot_Chnnel 1	
J24	GPIO Connector	*
J25	FDD Connector	
J26	Fan_3P	*
J27	SATA Connector_6	
J28	SATA Connector_5	
J31	SATA Connector_1	
J32	SATA Connector_2	
J33/J43/J44/ J45	USB Connector	*
J35	FrontPanel Connector	*
J37	ATX Power Connector 24P	
J38	PCI-Ex4 Connector	
J39	SATA Connector_3	
J40	SATA Connector_4	
J41	COM3 Connector	*
J42	COM4 Connector	*

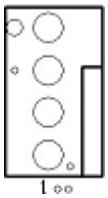
Pin Assignments of Connectors

J6 : AUDIO Connector



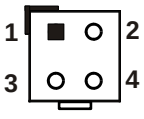
PIN No.	Signal Description
1	Line Out/IN
2	HeadPhone Out
3	MIC IN

J9 : CPU FAN 4P Connector



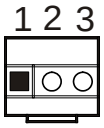
PIN No.	Signal Description
1	GND
2	+12V
3	SENSE
4	Control

J10 : Power 12V Connector



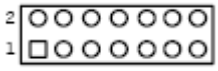
PIN No.	Signal Name	PIN No.	Signal Name
1	GND	3	+12V
2	GND	4	+12V

J17/J26 : 3P Fan connector



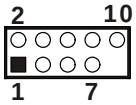
Pin No.	Signal Name
1	GND
2	+12V
3	SENSE

J24 : 8-bit GPIO



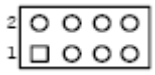
PIN No.	Signal Description	PIN No.	Signal Description
1	GPIO16	2	GPIO4
3	GPIO5	4	GPIO18
5	GPIO20	6	GPIO8
7	GPIO12	8	GPIO0
9	GPIO36	10	GPIO37
11	GPIO10	12	GPIO14
13	GND	14	+5V

J33/J43/J44/J45 : USB Connector



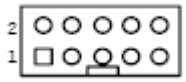
PIN No.	Signal Description	PIN No.	Signal Description
1	USB power (5V)	2	USB power (5V)
3	USB DATA A-	4	USB DATA B-
5	USB DATA A+	6	USB DATA B+
7	Ground	8	Ground
9	N/A	10	Ground

J35 : FrontPanel Connector



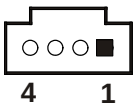
PIN No.	Signal Description	PIN No.	Signal Description
1	SATA LED+	2	SATA LED-
3	POWER LED+	4	POWER LED-
5	Power ON+	6	Power ON-
7	Reset+	8	Reset-

J41/J42 : COM3 & COM4 connector



PIN No.	Signal Description
1	DCD (Data Carrier Detect)
2	RXD (Receive Data)
3	TXD (Transmit Data)
4	DTR (Data Terminal Ready)
5	GND (Ground)
6	DSR (Data Set Ready)
7	RTS (Request to Send)
8	CTS (Clear to Send)
9	RI (Ring Indicator) or +12V
10	N/C

J53 : Audio CD- in Connector



PIN No.	Signal Description
1	CD-Left
2	CD-GND
3	CD-GND
4	CD-Right